

REMARKS

These remarks are responsive to the Office Action dated January 8, 2009. Claims 44-61 have been rejected. Claims 44-46 and 48-64 are pending in the present application. Claims 44, 49, 56, 58, and 59 have been changed, claim 47 has been cancelled, and claims 62-64 have been added by this amendment.

Applicant has amended claims 44, 49, 56, 58, and 59 and cancelled claim 47. Applicant is not conceding that the subject matter encompassed by previous claims is not patentable over art cited by the Examiner. These claims have been changed in this Amendment solely to facilitate expeditious prosecution of the present application. Applicant reserves the right to pursue claims directed to the subject matter encompassed by former claims and any other claims in one or more continuing and/or divisional applications.

The amendments and new claims are supported throughout the specification. For example, amendments to claim 44 are supported on page 22, lines 14-16; page 23, line 1 to page 25, line 22; and Figs. 5-12. The amendments to claim 56 are supported, for example, at page 20, lines 7-13 and page 21, lines 8-10. The amendments to claim 56 are supported, for example, at page 27, lines 16-23 and page 28, lines 1-13. New claim 62 is supported, for example, at page 16, 24, and 26. New claim 63 is supported, for example, at pages 23-25. New claim 64 is supported, for example, at page 27, lines 1-15. Thus, no new matter has been added.

§ 102 and 103 Rejections

Claims 44-55 and 61 were rejected under 35 U.S.C. § 102(a) as being anticipated by Jarzebowicz et al., “Creating SQL Queries the Easy Way with SQL Assist for DB2 UDB Version 8.1” (“Jarzebowicz”).

Claims 56-57 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jarzebowicz in view of Goldberg et al. (U.S. Patent 6,496,833) (“Goldberg”).

Claim 58 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Jarzebowicz in view of Goldberg and further in view of Banning et al. (U.S. Patent 5,421,008) (“Banning”).

Applicant respectfully traverses, and has amended claim 44 to clarify the invention and to expedite prosecution.

Claim 44 recites a method for creating a query search condition through a user interface and providing a query model, including displaying and receiving selection of column names and column operators, and generating a list of all column values that are selectable for use in the predicate of the query search condition based on the selected column name and operator. Claim 44 also recites using a processor to form a complete query statement based on, at least in part, the query search condition and selections in the user interface, and using the computer to process the complete query statement into a form defined by a query model, the form including a plurality of query elements corresponding to the complete query statement. The processing includes creating and storing the form including a tree structure for each of the query elements of the query statement, the form indicating relationships between all the query elements of the query statement.

Jarzebowicz does not disclose or suggest processing a query statement into a form defined by a query model, including creating and storing a tree structure for each query element as recited in claim 44. Jarzebowicz does not mention any details about any query model provided by the user interface of Jarzebowicz.

With reference to the 103 rejection of claims 56-57, the Examiner cited Goldberg as teaching a model content provider. Goldberg, however does not disclose or suggest the tree

structure for each query element as recited in claim 44. For example, Goldberg discloses a generator tool for generating query objects that interface client requests and database queries, but nowhere does Goldberg describe or suggest forming a query model for a query statement as recited in claim 44.

With reference to the 103 rejection of claim 58, the Examiner cited Banning as teaching defining a parent node, child node, and subtype child nodes and creating a tree structure representative of the selected query element. However, Banning does not disclose creating and storing a tree structure for each of a plurality of query elements of a complete query statement, the form showing relationships between all the query elements of the query statement. Banning discloses a number of different data structures in Figs. 3-7 for different query elements, which are used to define a query. However, Banning does not disclose creating and storing a tree structure for each of the query elements of a complete query statement. Applicant's complete query statement includes all the parts necessary to form the query, such as shown in the example of page 16, lines 1-22 of Applicant's specification. In contrast, Banning does not provide a tree structure for each query element of a query statement. For example, Banning discloses at col. 9, lines 28-66 parent nodes and child nodes for WHERE and HAVING conditions, and at col. 10, lines 12-44 Banning describes a tree structure between individual queries (not all of their query elements) that are related by a SET operation. However, these are only a few of the query elements in a complete query statement, and nowhere does Banning describe modelling a tree structure for other query elements. For example, nowhere does Banning describe modelling a FROM condition or GROUP BY condition in a tree structure; instead, such other query elements are provided in separate tables such as displayed tables 54 and 51 of Fig. 2 and separate data structures 300, 305, 330 of Fig. 3. Thus, Banning does not disclose or suggest creating and

storing a tree structure for each of the query elements of a complete query statement as recited in claim 44.

Furthermore, Banning does not disclose or suggest a form defined by a query model, the form showing relationships between all the query elements of the query statement, as recited in claim 44 and supported in Applicant's specification on page 22, lines 14-16 and Figs. 11 and 8-10, for example. Again, Banning discloses separate tables and data structures for query elements such as a FROM condition and a GROUP BY condition, as shown by separate data structures 300, 305, 330 of Fig. 3. Banning does not provide a form that indicates relationships between these query elements and other query elements such as the WHERE and HAVING conditions in data structures 320, 340, 482, 455 and 470 of Figs. 3 and 4. Banning thus does not create a form showing relationships between all the query elements of the query statement as recited in claim 44.

In view of the foregoing, Applicant believes that claim 44 is patentable over Jarzebowicz, Goldberg, and Banning.

Claims 45-61 are dependent from claim 44 and are patentable over Jarzebowicz, Goldberg, and Banning for at least the same reasons as claim 44, and for additional reasons.

For example, claim 56 recites using content viewers to interface to an application that uses the user interface and to process the query statement into the form defined by the query model by obtaining the query search condition and selections input in the user interface. Jarzebowicz, Goldberg, and Banning do not disclose or suggest these recited elements of claim 56. Jarzebowicz only describes that a query may be processed regardless of the tool or editor used to provide the query information, and does not disclose any details of content viewers, nor interfacing non-specific content viewers with a model content provider as recited in claim 56.

Goldberg teaches a query object that provides a database-independent API to higher levels for accessing the databases (col. 5, lines 44-67 and col. 6, lines 1-22). However, this is translating client requests into a more specific, database-specific API, not providing a user-interface-specific API to translate user-interface information into more general, non-specific information. Goldberg translates queries into database-specific information, and does not translate user-interface specific information into generalized query model information as recited in claim 56. Nor does Goldberg disclose processing generalized item provider objects for user interface GUI-specific structures as recited in claim 57.

Claim 58 recites defining parent, child, and subtype nodes for each query element, which is not disclosed or suggested by the cited references as explained above for claim 44.

Claim 59 recites adding at least one proxy query element to the form to replace at least one reference to at least one other form defined by the query model, and reestablishing the at least one reference to the form defined by the query model after code is generated from the form to avoid code being generated in the other form. None of the cited references disclose or suggest such a proxy element to avoid code generation in another form. The Examiner cited Goldberg at cols. 7 and 8, but Goldberg here is describing a client communicating with a query object using a reference, and the client linking to stub code to interface with a request-broker and communicate with a server. There is no indication anywhere in Goldberg of using a proxy query element to replace a reference to another form and reestablishing that reference after code generation, such that generation of code in another form is avoided.

In view of the foregoing, Applicant believes that claims 44-62 are patentable, and respectfully requests that the rejections under 35 U.S.C. 102 and 103 be withdrawn.

New Claims

New claims 62-64 are dependent from claim 44 and are patentable over Jarzebowicz, Goldberg, and Banning for at least the same reasons as claim 44, and for additional reasons. For example, claim 62 recites that the complete query statement includes at least one of a FROM clause and a GROUP BY clause, as disclosed in the specification for example at page 16 and pages 24-26. As explained above, none of the cited references disclose or suggest a tree structure including these elements or relationships between all such query elements. Claim 63 recites a tree structure with atomic query elements and combined query elements as disclosed in the specification for example at pages 23-26, and claim 64 recites calling to a combined query element to cause a return of the called combined query element and all of its sub-elements as disclosed at page 27, which are not disclosed or suggested by the references referred to above.

On the basis of the above remarks, reconsideration and allowance of the claims is believed to be warranted and such action is respectfully requested. If the Examiner has any questions or comments, the Examiner is respectfully requested to contact the undersigned at the number listed below.

Respectfully submitted,
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